Docket No. 65431(47992)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(S):	P.Qasba et al.	EXAMINER:	P.N. HYUNH
SERIAL NO.:	10/580,108	GROUP:	3742
FILED:	February 13, 2007		
FOR:	TARGETED DELIVERY SYSTEM FOR BIOACTIVE AGENTS		

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 CFR 1.131

The undersigned declare as follows:

1. We are co-inventors of the above-identified patent application assigned to the Government of the United States, as represented by the Secretary, Department of Health and Human Services.

2. Prior to August 2003, we had made and successfully tested targeted glycoconjugates. In particular, prior to August 2003 we had discovered that Y289L-Gal-T1, together with the modified UDP-α-galactose, that has at the second position of galactose chemically reactive group e.g. $-CH_2-C(=O)-CH_3$, is very useful for the synthesis of an unique disaccharide linkage of a glycoprotein that carries chemically reactive galactose moiety. In the mutant Y289L-Gal-T1 the binding pocket for UDP-α-galactose has been enlarged to accommodate modifications at C-2 position of galactose, in particular a ketone moiety that can serve as a neutral, yet versatile chemical handle.

3. The targeted glycoconjugates that we made and tested prior to August 2003 comprise a bioactive agent and a targeting compound, where the bioactive agent and targeting

compound are joined by a modified UDP galactose acetyl group (UDP-GalNAc), and wherein the modified UDP-GalNAc comprises a ketone group attached to the C2 position of the galactose ring.

4. Attached as Exhibit 1 is a true and accurate copy of a power point presentation prepared for internal use in our lab prior to August 2003. The first slide of the power point demonstrates applications of our Y289L-Gal-T1 mutant for the efficient tagging of free GlcNAc moieties of glycoproteins, such as antibodies. The second slide of the power point demonstrates a further particular use of the Y289L-Gal-T1 mutant for the efficient tagging of free GlcNAc moieties of glycoproteins, such as monoclonal antibodies. With the mutant Tyr289Leu-Gal-T1 and UDP-α-galactose-that is C2-modified, a galactose moiety, that has a chemically reactive group attached at the C2 position of galactose, can then be transferred to G0 glycoform of the monoclonal antibody. In the Tyr289Leu-Gal-T1 described in the present invention, the binding pocket for UDP-α-galactose has been enlarged to accommodate modifications at C2 position of galactose, for example the ketone moiety, that can serve as a neutral, yet versatile chemical handle. To these monoclonal antibodies (or any other glycoprotein, glycolipid or carbohydrate targeting compound), that carry the modified galactose with the reactive functional group, it is possible to couple any other agent.

5. We hereby further declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both (18 U.S.C. 1001), and that such willful false statements may jeopardize the validity of the above-identified application or any patent issued thereon.

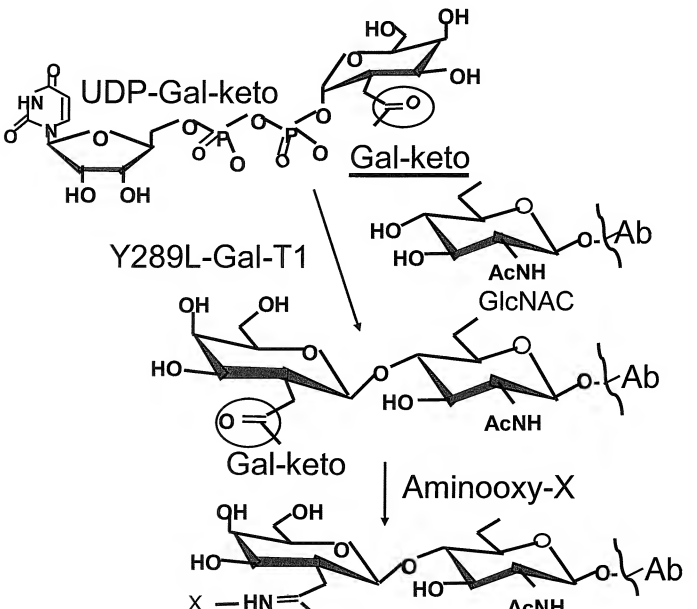
Date: 7/26/2010

Pradman Qasba

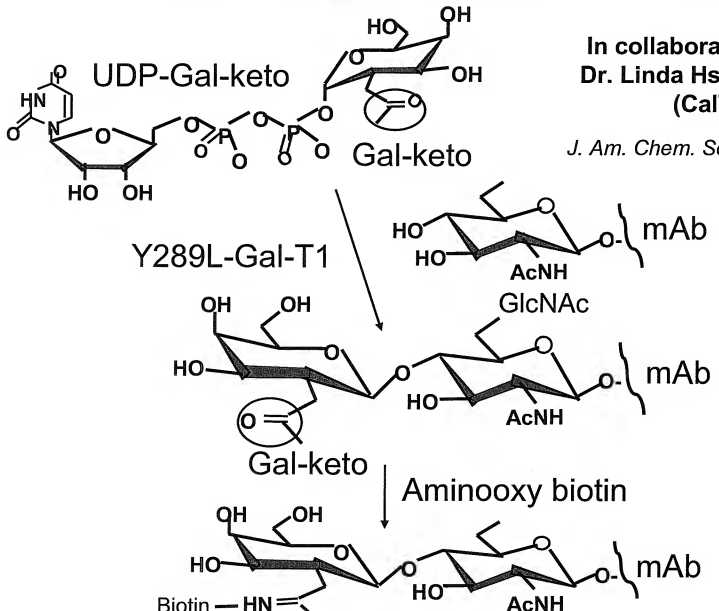
Date: 7/26/2010

Boopathy Ramakrishnan

Exhibit 1. Applications of Y289L-Gal-T1 mutant for the efficient tagging of Free GlcNAc moieties of glycoproteins, such as monoclonal antibodies



Applications of Y289L-Gal-T1 Mutant
Efficient Tagging of Free GlcNAc Moieties of Glycoproteins



In collaboration with
Dr. Linda Hsieh-Wilson
(CalTech)

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